

8317084188  
VBH0225RSLFZ

# EC centrifugal fan

backward-curved, single-intake

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### Nominal data

Type	8317084188	
Motor	E06005-30(M3G060-DA)	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min-1	2896
Power input	W	170
Current draw	A	1.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit  
Subject to alterations

### Data according to ErP directive

		Actual	Request 2015			
01 Overall efficiency $\eta_{es}$	%	54.2	43.4	09 Power input $P_{ed}$	kW	0.17
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	723
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	405
04 Efficiency grade N		72.8	62	10 Speed (rpm) n	min <sup>-1</sup>	2876
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data definition with optimum efficiency.  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

ID15124



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## Technical description

Weight	2.35 kg
Size	225 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	Plastic
Number of blades	7
Balancing grade according to DIN ISO 1940-1	G 6.3
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"><li>- Output 10VDC, max. 10 mA</li><li>- Tach output</li><li>- Power limiter</li><li>- Motor current limitation</li><li>- Soft start</li><li>- Control input 0-10 VDC / PWM</li><li>- Control interface with SELV potential safely disconnected from the mains</li><li>- Overvoltage protection</li><li>- Thermal overload protection for electronics / motor</li><li>- Line undervoltage detection</li></ul>
EMC immunity to interference	According to EN 61000-6-2(industrial environment)
EMC interference emission	According to EN 61000-6-3(household environment)
Touch current acc.IEC 60990	<=3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	GB12350, EN60034-1, EN60335-1, CCC, CE
Approval	

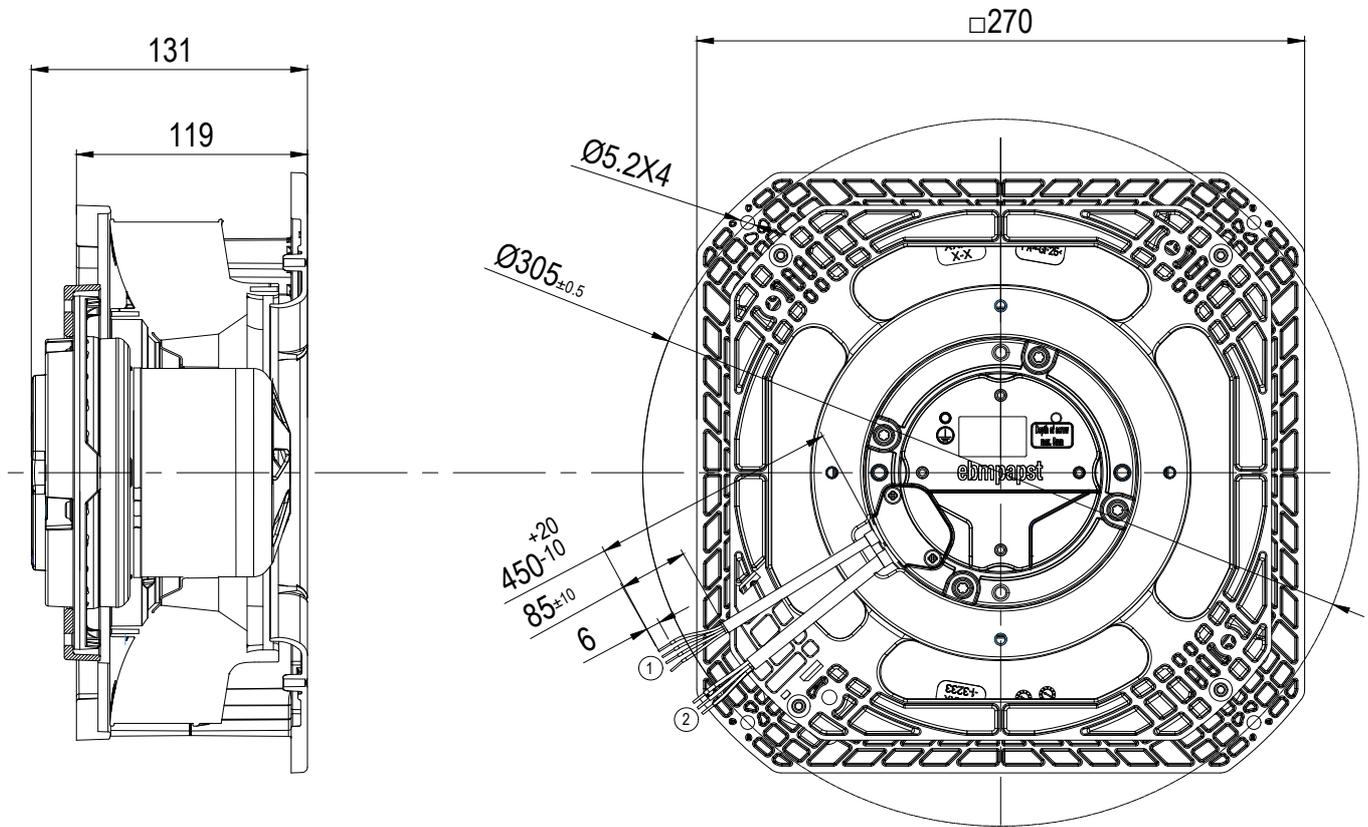


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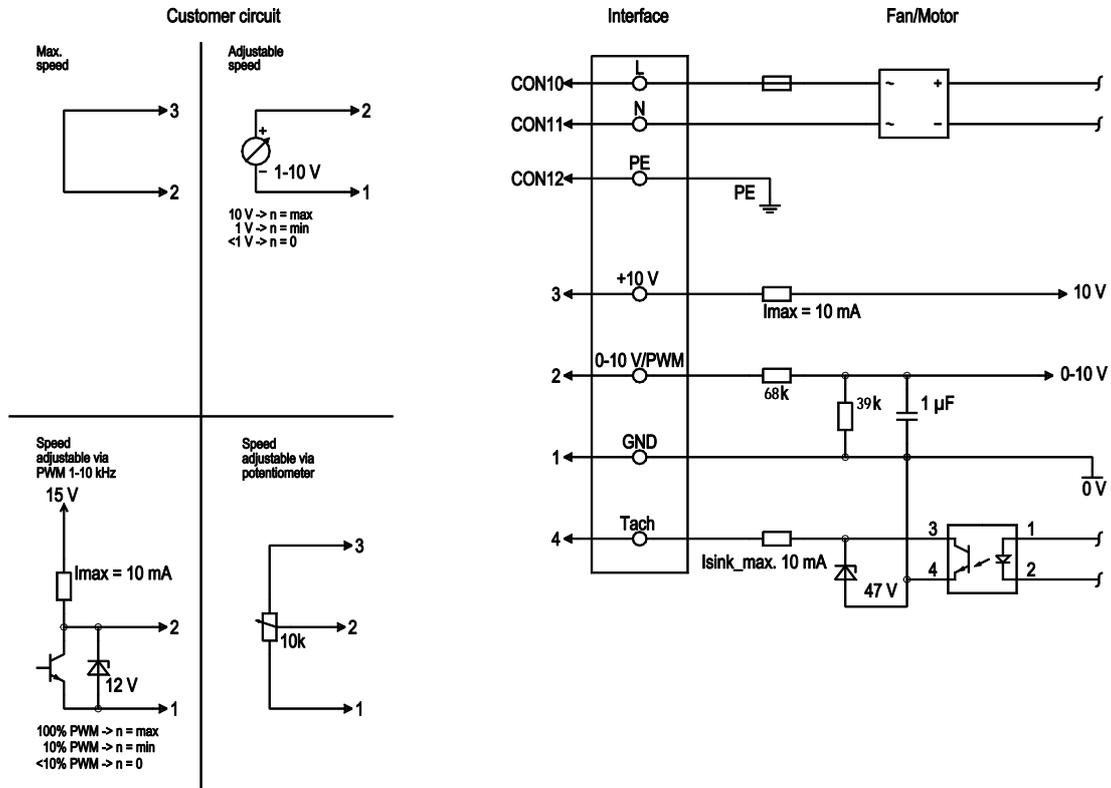
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## Product drawing



- |   |                                  |
|---|----------------------------------|
| 1 | Cable PVC 4x0.25 mm <sup>2</sup> |
| 2 | Cable PVC 3x0.5 mm <sup>2</sup>  |

## Connection diagram

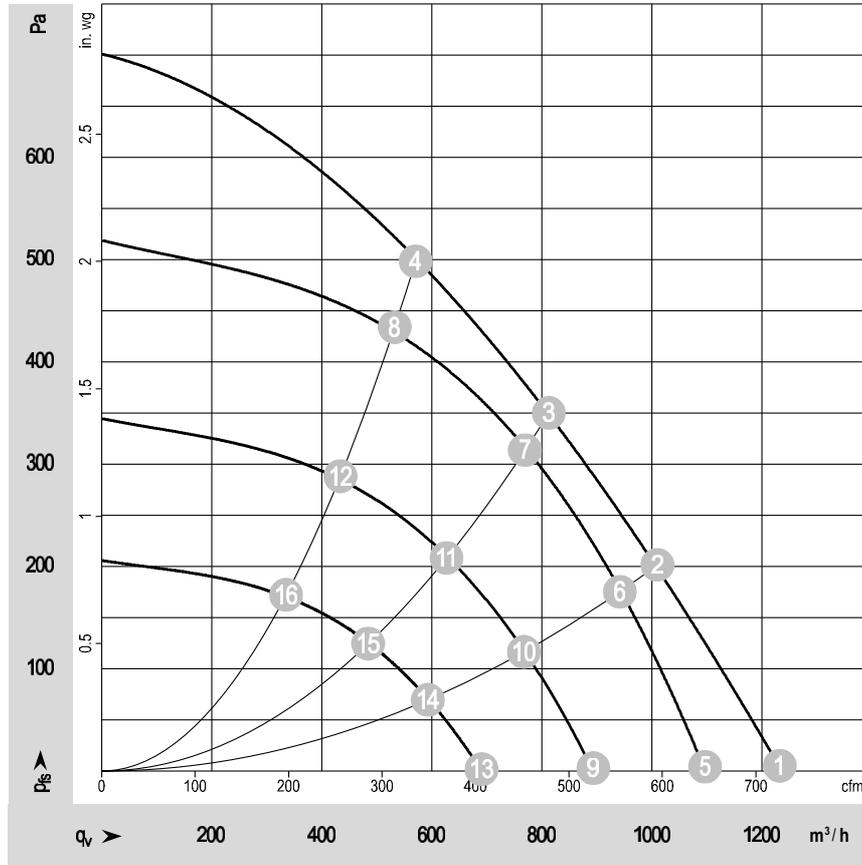


No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Protective earth
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, I <sub>max</sub> 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	2	0-10 V / PWM	yellow	0-10 V / PWM control input, R <sub>i</sub> =100 kΩ, SELV
	1	GND	blue	Reference ground for control interface, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, I <sub>sink max</sub> = 10 mA, SELV

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## Curves: Air performance



$\rho = 1.2 \text{ kg/m}^3 \pm 2 \%$

Measurement: ID 15124

Test Inlet Nozzle part number : 22510-2-2911  
Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

## Fan performance

Index	U	f	n	Ped	I	LpAin	LwAin	qv	pfs	qv	Pfs
	V	Hz	min-1	W	A	dB(A)	dB(A)	m3/h	Pa	cfm	in.wg
01	230	50	3035	170.0	1.23	72	80	1233	0	725	0
02	230	50	2896	170.0	1.23	67	74	1010	201	594	0.81
03	230	50	2852	170.0	1.24	62	70	813	350	478	1.41
04	230	50	2892	170.0	1.23	63	71	571	499	336	2.00
05	230	50	2700	119.7	0.87	69	77	1097	0	645	0
06	230	50	2700	137.8	1.00	65	73	942	175	554	0.70
07	230	50	2700	144.2	1.05	61	69	769	314	452	1.26
08	230	50	2700	138.4	1.00	61	69	533	435	314	1.75
09	230	50	2200	64.8	0.47	64	72	894	0	526	0
10	230	50	2200	74.6	0.54	60	68	767	116	451	0.47
11	230	50	2200	78.0	0.57	56	63	627	208	369	0.84
12	230	50	2200	74.8	0.54	56	64	434	289	255	1.16
13	230	50	1700	29.9	0.22	58	65	691	0	406	0
14	230	50	1700	34.4	0.25	53	61	593	69	349	0.28
15	230	50	1700	36.0	0.26	49	57	484	124	285	0.50
16	230	50	1700	34.5	0.25	50	58	335	172	197	0.69

U = Power supply · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side · q<sub>v</sub> = Air flow  
P<sub>fs</sub> = Pressure increase